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ABSTRACT

This document summarizes the findings and recommendations made in the study of alternatives to current provincial policies and procedures relating to school construction and its funding. Major areas of attention were construction policies, planning structures, alternatives to construction, and funding formulas. (Author/MLF)

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EXECUTIVE SUMMARY

SCHOOL FACILITY LOGISTICS

A STUDY FOR ALBERTA EDUCATION

DEALING WITH SCHOOL PLANNING, ACQUISITION, AND FUNDING ALTERNATIVES

By

Woods, Gordon & Co.
Management Consultants

in association with
The Brooker Engineering Group Ltd.

FEBRUARY, 1977

EXECUTIVE SUMMARY

The purpose of the study was to identify and examine alternatives to current Provincial policies and procedures relating to school construction and its funding.

Major areas of attention were construction policies, planning structures, alternatives to construction, and funding formulae. To accomplish this purpose it was necessary to re-examine historical patterns, demographic trends, (particularly shifting population patterns), and building alternatives. Particular attention was paid to the interactions of these factors, especially the long-term implications. The present has been used as a springboard to the future.

The generosity of educational facilities provision across the province continues to impress us. The per capita expenditure is above the Canadian average and the standards of space and environments in the buildings themselves are excellent. The Building Quality Restoration Program (BQRP) appears to be administered effectively and is obtaining good results. In these areas we have no cause to recommend changes and can only hope such standards can be maintained in the face of rising costs.

Of immediate concern is the degree of delay and confrontation caused by the present planning process where provincial control is exercised at the stage of inspection of plans. We feel that the School Buildings Branch should place less emphasis on plan inspection and become more involved as advance planning advisors. Provincial input should be transferred from that of plan approval in prescriptive detail to upfront involvement at a much earlier stage in the planning process.

Another concern is that of empty desks caused by demographic shifts. As this trend will continue into the foreseeable future, we felt obliged to present for your consideration (and ultimately before the local school boards for their consideration) the widest possible spectrum of building alternatives - alternatives which will enable you to operate an educational system, catering wisely for growth, decline and/or relocation. This takes us beyond new permanent buildings, quality restoration programmes into prefabrication, leasing and adaptation of existing buildings to educational use.

Because these solutions still failed to provide the necessary flexibility, we took a fresh approach by asking - when is a school not a school? Answer: when it's a community facility. Should we be thinking of the school building as an integral part of shared community facilities?

At this point, planning takes on a whole new dimension. In order to pursue the community facility concept, you need a planning mechanism to support and service it. The first step should come at the provincial level. We have already recommended that more emphasis be placed on advance planning, working with local school boards at a much earlier stage of the planning process in a spirit of mutual respect.

This planning advisory function should be extended, and we recommend the setting up of a Community Facilities Planning Group, with a small but highly professional staff to act as a technical resource willing and able to encourage and assist local boards in the kind of planning that will provide accommodation responsible to the changing needs of local communities over the lifetime of the facilities.

Local boards would shoulder the primary responsibility for planning and implementation. Initially, any group in the community which hoped to contribute to or benefit from the construction of a community facility would be consulted. In the long-term, these participating groups would be represented on the local board. It is conceivable in time that this expanded local council (the term school board being no longer applicable) would become an integral component of the elected political structure.

The school plan would involve not only the school facilities within the jurisdiction of the local school board but also the creation of purpose-built community facilities. Perhaps multi-facility plan would be a more accurate description.

We must look at a realistic time-frame for these changes. To realize the full implications of providing a community facility, a new planning horizon is essential. Plans must be prepared at two levels: long-term and short-term. By long-term we mean looking 25 to 30 years ahead; short-term means 3 to 5 years. Every multi-facility plan must include both types of plans.

In the body of the report, we discuss the various stages in the evolution from simple schoolhouse to sophisticated community facility. As we look ahead in time, the terminology, as already indicated, must change to accommodate new modes of thinking. To avoid confusion, we supply the following glossary of terms:

Existing Designation	Possible Future Alternative
School	Community Facility
Local School Board	Local Council
Multi-School Plan	Multi-Facility Plan
(The appropriate clustering of elementary and secondary schools.)	(Appropriate clustering of community facilities.)

The report sets out our findings and recommendations in detail in four sections:

I. School Facility Planning, Policies and Procedures

II. School Population Projections

III. Sharing, Acquiring and Disposing of Facilities

IV. School Facility Funding Alternatives

Our main recommendations are summarized below.

I. School Facility Planning, Policies and Procedures

The recommendations are divided between structure and process as follows:

The Planning Structure

We believe that Alberta Education should:

1. Continue to encourage the devolution of the responsibility for all planning and implementing to the local school board.

2. Develop the Community Facilities Planning Group as a staff technical support team for:

   a) developing guidelines (for local school board's use) for all elements of the facility other than those of a pedagogical nature,

   b) monitoring results,

   c) technical input as required, at all stages of the planning process,

d) encouraging long-range planning, and local community involvement.

The Community Facilities Planning Group should, for the present, reside in Alberta Education although in the longer term, a broader planning perspective could possibly be developed if it was made accountable directly to Executive Council.

3. Retain, for now, its responsibilities with respect to funding and approval of plans. This should be reviewed in the future, however, along with the role and accountability of the Community Facilities Planning Group.

The Planning Process

1. Provincial input should be transferred from that of plan approval in prescriptive detail to an upfront involvement in the early planning process.

2. The prescriptive detail in the school building regulation should be converted to guidelines, and should be subject to change by the Province in response to changing educational methods and techniques.

3. Province-wide school building regulations should provide for greater individual consultation with local school boards regarding their long-term and short-term multi-school plans.

4. The School Buildings Branch and School Buildings Board should become more involved as advance planning advisors.

5. The Community Facilities Planning Group must reflect the action plans of other government departments including the Alberta Departments of Culture, Parks Recreation and Wildlife, and Housing and Public Works.

6. Provincial government policy and guidelines should be integrated with the objectives of the local school board through a disciplined planning process. The local school board should then have autonomy for discretionary flexibility within the general limits of the long-term and short-term multi-school plan.

7. Each local school board will give first priority to the development of a 3 to 5 year community facilities plan and will invite the Community Facilities Planning Group to participate in the planning process.

8. The plan will be based on the best long-range demographic studies available looking 25 to 30 years ahead.

9. Community facilities should reflect flexibility as a dominant parameter of design for the uncertainties of our mobile society.

10. The ability to expand or contract is a necessary characteristic of a community facility in responsible planning for large expenditures of money.

11. School facility planning must now become part of community facility planning, which is part of neighbourhood planning, a component of municipal planning, a concern of the Cabinet Committee on Social Planning of the Government of Alberta.

12. The approach to school accommodation should change from exclusive, dedicated academic use to a community facility approach which will enable the facility to provide shared community needs.

II. School Population Projections

Population forecasting is obviously the most critical determinant for establishing school facility requirements. It is difficult to forecast at the best of times, but it is particularly so in Alberta with its high rate of in-migration and population shift. From July, 1974 to July, 1975, Alberta's population grew by 3.2 percent (compared with 1.6 percent nationally) to an estimated 1.77 million. This rapid population growth coincided with an increasing concentration of Alberta's population in the Edmonton and Calgary areas. The effect has been a rapid population increase for metropolitan areas, slow growth for most other towns, and a general decline in rural areas.

The Alberta Bureau of Statistics makes available population projections based on demographic criteria. Unfortunately, forecasts based solely on demographic criteria are inherently weak and unreliable over even short time periods. This is especially true of areas with changing economic and urban-industrial conditions such as Alberta.

An important task, then, is to assess the most likely economic prospects for Alberta and to arrive at an economically induced population forecast. A second important task is development of the processes for disaggregation and dimensioning of projected provincial population changes into a regional context for each of the ten Regional Planning Areas.

III. Sharing, Acquiring and Disposing of Facilities

The report discusses the advantages and disadvantages of sharing facilities with other public organizations and also private enterprise. It is concluded that there are significant advantages to be gained from sharing facilities.

The various methods of acquiring facilities are examined. These include:

- the construction of new permanent buildings - ranging from the traditional (tender and contract) approach to the systems building approach,
- the installation of transportable units or other forms of relocatable or disposable facilities.

In addition, facility renovation and/or addition and disposition are examined together with the questions of leasing. Discussion on pupil transportation and information dissemination takes place in Appendices VII and VIII.

The report points out that school boards should be encouraged to analyze all the foregoing building alternatives for each project, taking into account a long-term forecast, population shift, time elements, pupil access, zoning, etc.

The report describes the core school concept and its advantages in providing good pupil accommodation when there is uncertainty about potential enrolments. School facility planners should continue to use this concept.

The most stifling effect of the established planning procedures is the emphasis it places on the individual school projects, and the short-term nature of the forecast of needs. The procedure encourages a school board to isolate each project at as early a stage as possible, and to think only in terms of the first short period of the school's existence - a period normally associated with growth. In this environment, it is natural for a school board to become caught up in the excitement of producing a note-worthy building each time the opportunity arises. The system tends to constrain, and be narrow in its approach.

More emphasis should be placed on multi-school, multi-level, multi-departmental planning at an early stage, and this planning should look as far into the future as possible.

Broad long-range conceptual planning, and the development of master plans are required.

IV. School Facility Funding Alternatives

The study found that the existing school funding mechanism is not a major factor contributing to present planning deficiencies and may be left unchanged for the short-term. The report recommends that the debenturing process for financing the capital cost of school construction be continued, but a suitable mechanism for determining the split between the local and provincial share of the costs be developed.

Four new funding mechanism alternatives and a recommended utilization mechanism are examined:

Funding Mechanisms

1. A Local School Construction Levy to a Specified Maximum Mill Rate.

Under this system, each school district would be required to finance the annual cost of its own new schools to a specified maximum mill rate applied to its equalized property assessment value. Any deficiency in meeting the approved construction costs would be made up by the Province.

The levy would be identified clearly as a "school construction levy" in order to differentiate it from the existing 26 mill non-residential levy which helps finance the School Foundation Program Fund. Costs over and above the approved construction cost level would continue to be provided from an optional local assessment.

2. Limit Provincial Funding to the Reciprocal Percentage which the Local Equalized Assessment Base Bears to the Total Provincial Assessment Base.

Under this mechanism, the approved construction cost of new facilities is first calculated on a square footage basis as under the existing method. Whereas existing funding arrangements call for the Province to support debentures for the total amount of these approved costs, this proposal would limit the provincial support at the reciprocal percentage relationship which the local assessment base bears to total provincial assessment. For example, a large relatively wealthy district having 25%

of total provincial assessment would be supported to the 75% level of approved costs. A much smaller district, having only 1% of the provincial total assessment, would receive 99% of the approved cost of its construction program.

3. Change the Existing Square Footage Support Rates to Reflect a District's Ability to Pay.

A simple way to shift school construction costs to the local boards would be to lower the provincial support level to something less than 100% of the approved costs or by lowering the approved costs themselves by paying a lesser percentage of the existing standard square footage construction cost rates. To be equitable, however, such a reduction in the percentage should not be uniform for all districts as this would only heighten the disparity which now exists between the individual boards' abilities to provide facilities over and above the floor level supported by the standard rates. A fairer means of determining a district's provincial support rate would be based on the reciprocal percentage that local assessment for that district bears to total provincial assessment. This is simply a variation in application of the formula used under Alternative 2.

4. Shift Full Responsibility for the Provision of School Facilities to the Province.

Under this funding mechanism alternative, the prime responsibility for providing and maintaining suitable physical facilities would be removed from the local boards and vested in an appropriate government department, either within or outside of the Department of Education.

Such a step would, in no way, be intended to infringe upon the boards' existing level of authority in establishing and operating educational programs. The local boards would still be responsible for the definition of need for educational facilities. It is only the actual construction of modifications in response to the definition of need that would be shifted to the Province. The relationship between local boards and provincial authorities and the responsibiiities of each in ensuring that proper school facilities were available where required would need to be defined clearly as part of the planning process.

With the actual construction of facilities being managed centrally by the Province, the Province would also undertake to finance all capital costs completely from provincial revenues and ownership of the facilities would remain with the Province.

Utilization Mechanism

The study identified a need for the development and application of a utilization mechanism to prevent overbuilding in school facilities. The suggested method is to tie provincial support to the rates of existing student spaces to enrolment projections through the introduction of a utilization ratio which would decrease the support eligible to any district which already has excess space according to the ratio chosen.

The mechanism may be based on the ratio of the total school spaces in a district to the maximum enrolment projected in the next few years in that district. In order to permit the required flexibility for the type of space required it may be necessary to compute separate ratios for elementary, junior high school and senior high school sections and to

incorporate some flexibility for specialized curricula. Under these space controls the Province would refuse to provide any support to a local board requesting additional space which would cause its relevant space to enrolment ratio or "control ratio" to exceed the established maximum.

The degree to which the Province would support the capital funds which qualify under these constraints could be further refined depending upon how closely a district's control ratio approached the maximum amount over which no provincial funds would be forthcoming for further facilities. For example, if the maximum control ratio were set at 1.25 to 1, the Province would provide no support for construction in a district where this ratio was already exceeded. It would further be established that a district having a ratio between 1.25 and 1.20 to 1 qualified for 50% provincial support based on approved capital cost requirements. A ratio of 1.15 to 1.20 might qualify for 75% support and any ratio below 1.15 would receive 100% provincial support.

Consideration of these alternatives clearly shows that no funding mechanism, in itself, can substitute for the need for sound school facility planning. Cognizant of this the report recommends that Alternative No. 3 together with the proposed utilization mechanism present the best choice for the future. It is recommended, therefore, that Alberta Education:

1. Change the existing square footage support rates to reflect a district's ability to pay. The ability to pay should be based on the reciprocal percentage which the local equalized assessment base bears to the total provincial assessment base and the square footage support rate to be applied to a particular district should recognize differences in local construction costs and other specific circumstances which affect that district relative to provincial average costs.

2. Tie provincial support to the rates of existing student spaces to enrolment projections through the introduction of a utilization ratio which would decrease the support eligible to any district which already has excess space according to the ratio chosen.

Conclusion

We recognize the significance of our recommendations. We also appreciate the difficulties that will have to be overcome to make them work. However, if they are accepted, we believe that, in time, the efficiency of the educational facilities provided for the citizens of Alberta, in the broadest sense of the word, will be greatly improved.

We are most thankful to the informed people, (see Appendix I for the list of those interviewed) who were kind enough to give us their views.

Woods, Gordon & Co.

PERSONS INTERVIEWED

Woods, Gordon & Co. and Brooker Engineering, gratefully acknowledge the cooperation of the following persons and wish to express appreciation for the time made available for meaningful interviews.

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Dr. S.N. Odynak, Associate Deputy Minister
Dr. J.W. Kulba, Director School Buildings Administration, Chairman, School Buildings Board
Mr. J.H. Blocksidge, Associate Director, School Buildings Administration, Member School Building Board
Mr. L.S. Grant, Secretary School Buildings Board
Mr. W.J. Ede, Member, School Buildings Board
Dr. J.E. Reid, Director, Student Evaluation and Data Processing
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Dr. W.E. Hathaway, Educational Consultant
Dr. W.P. Eddy, Educational Consultant
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Mr. J. Holden, Architect School Buildings Branch
Mr. M.A. Weleschuk, School Buildings Branch
Mr. W. Belous, School Buildings Branch
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Mr. N.J. Chamchuk, Director Communications
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Mr. W.T. Worbets, Associate Director, Field Services
Mr. D. Ewasiuk, Coordinator, Educational Opportunities Fund
Mr. H. Lehmann, Field Administration Officer

Alberta Bureau of Statistics

Mr. R.T. Lennon, Labour Statistics
Mr. D. Monson, Chief Inspector, Standards Branch

Alberta Treasury Department

Mr. H.H. Strohbach, Director of Finance, Member of School Buildings Board

Department of Parks, Recreation, and Wildlife

Mr. D. Rudge, Assistant Director, Community Recreation Services

Department of Labour

Mr. D. Monson, Chief Inspector, Standards Branch

Department of Municipal Affairs

Mr. W.D. Isbister, Deputy Minister and Chairman Provincial Planning Board
Mr. N. Dant, Planning Consultant

Alberta Municipal Finance Group

Mr. R.A. Splane, General Manager
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Dr. E.J. Hodgson, Professor

Alberta Educational Communications Corporation

Mr. L.T. Shorter, President

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	- Mr. Mills
	- Mr. J. Smart
	- Mr. G. Branson
Calgary Separate	- Mr. J.V. Van Tighem
Edmonton Public	- Mr. M.A. Strembitsky
	- Dr. C. Smith
	- Mr. G. Luck
Edmonton Separate	- Mr. H.A. MacNeil
	- Mr. W. Pasternak
Grande Prairie	- Mr. K. Wagner
	- Ms. M. Moffett
Medicine Hat	- Dr. K.C. Sauer
	- Mr. F.B. Allore
Lethbridge	- Mr. C.E. Burge
	- Mr. R. Himsl
Fort McMurray	- Mr. J.L. Sacher

Alberta, Boards of Education (Cont'd)

Red Deer	- Mr. G.H. Dawe Mr. J. Docherty
St. Albert	- Dr. W.G. Zielinski
County of Strathcona	- Dr. G. Rancier
Foothills School Division	- Mr. J.E. Finnman
Camrose School District	- Mr. E.G. Hohn
Rangeland School Division	- Mr. W. Terriff
Calgary School Division	- Mr. J.C. Macdonell

Municipal Planners

Calgary
Edmonton
Grande Prairie
Medicine Hat
Lethbridge
Fort McMurray
Red Deer
St. Albert
Sherwood Park

School Board Members

Mrs. Craigie, Chairman, Red Deer School District
Mr. Bill Leslie, Member, Grande Prairie School District

Alberta Associations

Conference of Alberta School Superintendents:	Mr. A. Myhre Stony Plain
The Alberta School Trustees Association:	Mr. S. Maertz Mr. D. Vizina Mr. L. Tymko C. Rea
The Alberta Teachers' Association:	Dr. N.R. Hrynyk
The Federation of Home and School Associations:	Mrs. D. Christie

Alberta Associations (Cont'd)

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The Alberta Association of Professional Engineers	
The Alberta Construction Association	
Alberta School Plant Officials	Mr. D. Pettinger
Alberta Association of Municipal Districts and Counties:	Mr. J.E. Edworthy

Portable Classroom Manufacturers

Prince Edward Island

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Newfoundland

Mr. M. Riggs - Chief Superintendent
Mr. R. Adams - Engineer School Construction

Nova Scotia

Mr. McGuire
Mr. Higden
Mr. Baker - Director Planning D.P.W.

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Mr. S. Orlowski - Chief Architect, Ministry of Colleges and Universities
Mr. D. Patterson - Supt. Design and Construction, North York
Mr. K. Cochran - Supt. Design, Toronto Separate School Board
Mr. Rankin - Assistant Chief Architect, Department of Education

Scarborough Board of Education

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Mr. Leonard - Superintendent of Plant

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